Pending Claims

This listing of claims is a courtesy copy of the pending claims. No amendments have been made in this Reply.

1. (original) A method of automatically setting up a redirector of domain name system (DNS) name requests, said method comprising the steps of:

transmitting to a remote gateway via a tunnel of a virtual private network (VPN) a DNS setup packet comprising a global name of a home network, and a private address of a DNS server in said home network;

receiving from said remote gateway via said tunnel a DNS setup reply packet comprising a global name of another home network, and a private address of a DNS server in said other home network; and

configuring an application level gateway of said DNS server (DNS-ALG) in said home network dependent upon said DNS setup reply packet to redirect DNS name requests for said global name of said other network to said DNS server in said other network.

2. (original) The method according to claim 1, further comprising the step of extracting from said DNS setup reply packet said global name of said other home network, and said private address of said DNS server in said other home network.

3. (original) The method according to claim 1, further comprising the step of resolving address conflicts between said home network and said other home network.

4. (original) The method according to claim 1, further comprising the step of generating a DNS setup packet comprising said global name of said home network, and said private address of said DNS server in said home network.

5. (original) The method according to claim 1, wherein said global names of said home network and said other home network are fully qualified domain names (FQDNs).

6. (original) The method according to claim 1, wherein said configuring step comprises adding a redirect data structure in a configuration data structure of said DNS-ALG.

7. (original) The method according to claim 1, further comprising the step of using a two-faced DNS system coupled to said DNS-ALG in said home network, said two-face DNS system comprising an internal side DNS server and an external side DNS server, said internal side DNS server resolving host names received via said VPN tunnel to corresponding private addresses.

8. (original) A method of resolving a domain name request in a domain name system (DNS), said method comprising the steps of:

determining if a domain name in a domain name request received by an application level gateway of a DNS (DNS-ALG) in a home network is not for said home network; and

if said domain name request is determined to not be for said home network, forwarding said domain name request via a virtual private network (VPN) tunnel to an application level gateway of a DNS (DNS-ALG) of another home network specified by a redirector configured in said DNS-ALG of said home network, said redirector being dependent upon a global name of said other home network and a private address of said DNS server in said other home network.

9. (original) The method according to claim 8, further comprising the steps of resolving a global domain name for said domain name request and forwarding a reply to a requesting host in response to said request, if said domain name request is determined not to be for said home network and said DNS-ALG of said home network does not have a redirector specified.

10. (original) The method according to claim 8, further comprising the steps of, if said domain name request is determined to be for said home network, forwarding a reply to said requesting host from one of an external side DNS server and an internal side DNS server of said home network dependent upon whether the domain name request is from one of an internal host of said home network and said VPN, respectively.

11. (original) A gateway for communicating between two or more home networks, comprising:

at least one communications interface for transmitting and receiving data;

a storage unit for storing data and instructions to be performed by a processing unit; and

a processing unit coupled to said at least one communications interface and said storage unit, said processing unit is programmed to:

transmit to a remote gateway via a tunnel of a virtual private network (VPN) a DNS setup packet comprising a global name of a home network, and a private address of a DNS server in said home network;

to receive from said remote gateway via said tunnel a DNS setup reply packet comprising a global name of another home network, and a private address of a DNS server in said other home network; and

to configure an application level gateway of said DNS server (DNS-ALG) in said home network dependent upon said DNS setup reply packet to redirect DNS name requests for said global name of said other network to said DNS server in said other network.

12. (original) The gateway according to claim 11, wherein said processing unit is programmed to extract from said DNS setup reply packet said global name of said other home network and said private address of said DNS server in said other home network.

13. (original) The gateway according to claim 11, wherein said processing unit is programmed to resolve address conflicts between said home network and said other home network.

14. (original) The gateway according to claim 11, wherein said processing unit is programmed to generate a DNS setup packet comprising said global name of said home network and said private address of said DNS server in said home network.

15. (original) The gateway according to claim 11, wherein said global names of said home network and said other home network are fully qualified domain names (FQDNs).

16. (original) The gateway according to claim 11, wherein configuring said DNS-ALG comprises adding a redirect data structure in a configuration data structure of said DNS-ALG.

17. (original) The gateway according to claim 11, further comprising a two-faced DNS system coupled to said DNS-ALG in said home network, said two-face DNS system comprising

an internal side DNS server and an external side DNS server, said internal side DNS server resolving host names received via said VPN tunnel to corresponding private addresses.

18. (original) The gateway according to claim 11, wherein said processing unit is programmed:

      to determine if a domain name in a domain name request received by said DNS-ALG in said home network is not for said home network; and

      if said domain name request is determined to not be for said home network, to forward said domain name request via said virtual private network (VPN) tunnel to an application level gateway of a DNS (DNS-ALG) of another home network specified by a redirector configured in said DNS-ALG of said home network.

19. (original) The gateway according to claim 18, wherein said processing unit is programmed to resolve a global domain name for said domain name request and to forward a reply to a requesting host in response to said request, if said domain name is determined note to be for said home network and said DNS-ALG of said home network does not have a redirector specified.

20. (original) The gateway according to claim 18, wherein said processing unit is programmed, if said domain name request is determined to be for said home network, to forward a reply to said requesting host from one of an external side DNS server and an internal side DNS server of said home network dependent upon whether the domain name request is from one of an internal host of said home network and said VPN, respectively.